A RANDOMISED CONTROLLED STUDY COMPARING INTRATHECAL HYPERBARIC BUPIVACAINE-FENTANYL MIXTURE AND ISOBARIC BUPIVACAINE-FENTANYL MIXTURE IN COMMON UROLOGICAL PROCEDURES.

BACKGROUND AND AIMS: Bupivacaine is available in isobaric and hyperbaric forms for intrathecal use and opioids are used as additives to modify their effects. The aim of this study was to compare the efficacy and haemodynamic effect of intrathecal isobaric Bupivacaine-Fentanyl mixture and hyperbaric Bupivacaine-Fentanyl mixture in common urological procedures.

Methods: Eighty American Society of Anesthesiologists physical status 1 and 2 patients undergoing urological procedures were randomized into two groups. Group A received 3 ml of 0.5% isobaric Bupivacaine with 25 μg Fentanyl while Group B received 3 ml of 0.5% hyperbaric Bupivacaine with 25 μg Fentanyl. The parameters measured include heart rate, blood pressure, respiratory rate,maximum sensory block level achieved and onset and duration of motor and sensory blockade. Stastical analysis was done using SPSS software (version 20). Baseline variables between the two groups were compared using Chi-square test. The mean of two groups were compared using student t-test.

Results: The haemodynamic stability was better with isobaric Bupivacaine -Fentanyl mixture (Group A) than with hyperbaric Bupivacaine- Fentanyl mixture (Group B) .

The mean onset time in Group A for both sensory block (4.25 min) and motor block (5.25 min) was longer when compared with Group B. The duration of sensory block (130.75 ± 5.72 min) and motor block (183.00 ± 7.23 min) was less with isobaric Bupivacaine group when compared with hyperbaric Bupivacaine group (sensory blockade 189.50 ± 9.59 min and motor blockade 230.25 ± 8.62 min). 32(80%) patients had a block height of T10 in Group A whereas 34 (85%) patients had a block height of T6 in group B. More patients in Group A required intravenous sedation when compared to Group B.

Conclusion: Isobaric Bupivacaine- Fentanyl mixture was found to provide adequate anaesthesia with minimal incidence of haemodynamic instability.

Key words: Bupivacaine, Fentanyl, Hyperbaric, Isobaric, Spinal Anaesthesia